

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A ball valve (1) having comprising a housing (H) which is mounted rotation about an axis of operation (A), having an inlet and an outlet, a ball valve member which is a ball (2) rotatably mounted within the housing and movable about an axis of operation, the ball valve member (2) having a passage (P) cooperating with the inlet and outlet of the housing through which fluid flows from an inlet (I) the housing (H) to an outlet (O) of the housing (H), and the ball (2) having one end of the passage (P) and a metering opening (4) formed in the ball valve member adjacent one end of the passage for the fluid, wherein the ball valve member being is rotatable about the axis of operation (A) between a first closed position in which the opening (4) is concealed by an adjacent housing wall and such that fluid flow through the passage (P) is prevented, and a fully at least one open position in which the opening (4) is aligned with one of the inlet (I) and outlet (O) of the housing (H) to permit of maximum fluid flow through the passage (P), characterized in that the metering opening (4) in the ball valve member (2) at the one end of passage (P) is provided formed by removing material by high pressure fluid jetting to create the desired shape to control the flow of fluid through the metering opening.

2. (Currently Amended) A valve according to claim 1 characterized in that the metering opening (4) includes a slot part (S) which extends generally normally to the axis operation (A) of the ball valve member (2) and when the ball valve member (2) is rotated a small from its the closed position to the at least one open position, permits only a minimal fluid flow through the passage (P), and the slot part (S) opening into a main part (M) of the opening which when the ball valve member (2) is rotated to its fully open position allows a maximum fluid flow through the passage (P).

3. (Currently Amended) A valve according to claim 1 characterized in that a second end of the passage (P) opposite to the first end, and a passage part between the first and second ends of the passage (P) is a drilling and the opening (4) being formed at the one end of the passage (P) where the drilling has not penetrated an outer wall of the ball valve member (2).

4. (Currently Amended) A valve according to claim 1 characterized in that the ball valve member (2) provided in a metallic material.

5. (Currently Amended) A valve according to claim 1 characterized in that to enable the ball valve member (2) to be rotated in the housing (H) about the axis of operation (A), ball valve member (2) includes in the outer wall of the ball valve member (2), a recess (R) to receive operating device (7,6) which extends through the housing (H) to an external operating position.

6. (Currently Amended) A valve according to claim 1 characterized in that the valve includes a valve body (1) in which the housing (H) is provided, the body having fluid inlet and outlet connections (5) which permit fluid to flow to the inlet (I) and from the outlet (O) of the housing (H) in which the ball valve member (2) is provided.

7. (Withdrawn) A method of making a ball (2) for a ball valve (1), the ball (2) use being mounted in a housing(H) for rotation about an axis of operation(A), the ball (2) having a passage(P) through which fluid flows from an(I) of the housing (H) to an outlet (O) of the housing (H), and the having at one end of the passage(P) a metering opening(\$) in the ball atone end of the passage (P) by removing material by high pressure fluid jetting.

8. (Withdrawn) A method according to claim 7 characterized in that a second end of the passage (P) opposite to the first end, and a main passage part between the first and second ends of the passage are provided by drilling prior to the opening at the first end of the passage(P) being formed through the wall of the ball (2).

9. (Withdrawn) A method according to claim 7 characterized in that the opening(4) is formed by fluid jetting using fluid pressures of at least 2000bar and more preferably at least 3000 bar and yet more preferably of about 4000bar.

10. (Withdrawn) A method according to claim 7 characterized in that during fluid jetting, desirably the method includes inserting into the passage(P) a hollow shaft to support the ball (2) and maintain the ball in a fixed position so that the opening (4) may accurately be formed.

11. (Withdrawn) A method according to claim 7 characterized in that the fluid is jetted from a nozzle which is positioned close to the wall of the ball (4) at the one end of the passage(P) and the ball (1) is maintained stationary during water jetting and the nozzle is moved to create the desired shape of opening(4).

12. (Withdrawn) A method according to claim 7 characterized in that the method includes providing a recess (R) in a wall of the ball (2) to receive operating device (7) by which in use, the ball (2) may be rotated in housing(H) about the axis of operation(A).

13. (New) A valve comprising:
a housing having an inlet and an outlet;
a ball valve member rotatably mounted within the housing and movable about an axis of operation;
a passage formed in the ball valve member cooperating with the inlet and outlet of the housing through which fluid flows; and
a metering opening formed in the ball valve member adjacent one end of the passage, wherein the ball valve member is rotatable about the axis of operation between a closed position in which the opening is concealed by an adjacent housing wall such that fluid flow through the passage is prevented, and at least one open position in which the metering opening is at least partially aligned with one of the inlet and outlet of the housing to permit fluid flow through the passage,

characterized in that the metering opening in the ball valve member at the one end of passage is formed by removing material by high pressure fluid jetting to create a slot part which extends generally normally to the axis operation of the ball and when the ball is rotated a small from its closed position, permits only a minimal fluid flow through the passage, and the slot part opening into a main part of the opening which when the ball is rotated to its fully open position allows a maximum fluid flow through the passage.

14. (New) A valve according to claim 13 characterized in that a second end of the passage opposite to the first end, and a passage part between the first and second ends of the passage is a drilling and the opening being formed at the one end of the passage where the drilling has not penetrated an outer wall of the ball valve member.

15. (New) A valve according to claim 13 characterized in that the ball valve member is formed from a metallic material.

16. (New) A valve according to claim 13 wherein the ball valve member includes a recess formed in the outer wall of the ball valve member to receive an operating device which extends through the housing to an external operating position

17. (New) A valve according to claim 16 wherein the operating device of the ball valve member allows the ball valve member to be rotated in the housing about the axis of operation between the closed position and the at least one open position.

18. (New) A valve according to claim 13 characterized in that the valve includes a valve body in which the housing is provided, the body having fluid inlet and outlet connections which permit fluid to flow to the inlet and from the outlet of the housing in which the ball valve member is provided.

19. (New) A ball valve for use in combination with a housing for a valve for controlling the flow of fluid, the ball valve comprising:

a ball valve member formed from a metallic material rotatably mounted within the housing and movable about an axis of operation, the ball valve member including a recess formed in the outer wall of the ball valve member to receive an operating device which extends through the housing to an external operating position and a passage formed in the ball valve member cooperating with the inlet and outlet of the housing through which fluid flows; and

a metering opening formed in the ball valve member adjacent one end of the passage, wherein the ball valve member is rotatable about the axis of operation between a closed position in which the opening is concealed by an adjacent housing wall such that fluid flow through the passage is prevented, and at least one open position in which the metering opening is at least partially aligned with one of the inlet and outlet of the housing to permit fluid flow through the passage,

characterized in that the metering opening in the ball valve member at the one end of passage is formed by removing material by high pressure fluid jetting to create a slot part which extends generally normally to the axis operation of the ball and when the ball is rotated a small from its closed position, permits only a minimal fluid flow through the passage, and the slot part opening into a main part of the opening which when the ball is rotated to its fully open position allows a maximum fluid flow through the passage.

20. (New) A valve according to claim 19 wherein the operating device allows the ball valve member to be rotated in the housing about the axis of operation between the closed position and the at least one open position.